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Matteo Venturelli

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WORK EXPERIENCE

UNIVERSITY OF MODENA AND REGGIO EMILIA – REGGIO EMILIA, ITALY

ASSISTANT PROFESSOR – 01/02/2025 – CURRENT

DEPARTMENT OF SCIENCE AND METHODS FOR ENGINEERING – DISMI – UNIVERSITY OF MODENA AND REGGIO EMILIA – REGGIO EMILIA, ITALY

RESEARCH FELLOW – 01/09/2022 – 31/01/2025

Coordination activities and research activities on the iWAYS project (Innovative WAter recoverY Solutions through recycling of heat, materials and water across multiple sectors) H2020-LCCI-2020-EASME-singlestage - Project ID: 958274.

DEPARTMENT OF SCIENCE AND METHODS FOR ENGINEERING – DISMI – UNIVERSITY OF MODENA AND REGGIO EMILIA – REGGIO EMILIA, ITALY

RESEARCH FELLOW – 01/11/2021 – 31/08/2022

Development of numerical models for the iWAYS project (Innovative WAter recoverY Solutions through recycling of heat, materials and water across multiple sectors) H2020-LCCI-2020-EASME-singlestage - Project ID: 958274.

DEPARTMENT OF SCIENCE AND METHODS FOR ENGINEERING – DISMI – UNIVERSITY OF MODENA AND REGGIO EMILIA

RESEARCH FELLOW – ENERGY CONVERSION SYSTEM-POWER TRANSMISSION – 30/04/2017 – 30/10/2018

Numerical modelling and experimental characterization for the design and efficiency evaluation of industrial processes**.**

DEPARTMENT OF SCIENCE AND METHODS FOR ENGINEERING – DISMI – UNIVERSITY OF MODENA AND REGGIO EMILIA

INTERNSHIP AT HYDRAULIC SYSTEM DESIGN RESEARCH GROUP – 31/08/2016 – 30/03/2017

Performance evaluation and economic assessment of an innovative ventilated façade for the energy efficiency enhancement of a building envelope.

DEPARTMENT OF SCIENCE AND METHODS FOR ENGINEERING – DISMI – UNIVERSITY OF MODENA AND REGGIO EMILIA

PH.D. STUDENT IN "INDUSTRIAL INNOVATION ENGINEERING – 01/11/2018 – 31/10/2022

Research in the sector of systems for the energy conversion and recovery, environment, and sustainability.
Involvement in the European Projects: ETEKINA and iWAYS. The overall objectives of the projects are the improvements of the energy efficiency of industrial processes by means of the valorisation of waste heat. The heat recovery solutions are demonstrated in three different industrial sectors.
I have worked on the following: supporting the coordination activities of the iWAYS project and leading commissioning of the heat recovery systems in ETEKINA project.

Development of numerical approaches (both lumped and distributed parameter and full CFD) that can simulate the performance of industrial processes in terms of energy consumption, environmental impact, and product quality.

EDUCATION AND TRAINING

31/10/2018 – 31/10/2018 Reggio Emilia, Italy

PH.D. STUDENT IN "INDUSTRIAL INNOVATION ENGINEERING". Department of Science and Methods for Engineering – DISMI – University of Modena and Reggio Emilia

During my Ph.D. program I spent 6 months as research guest at Brunel University – Heat Pipe and Thermal Management Laboratory (03/2019 – 09/2019). I collaborated with foreign professors and researchers for the development of a shared project

Address Via Amendola 2, 42122, Reggio Emilia, Italy | **Website** http://www.iii.unimore.it/site/home.html

31/08/2014 – 10/04/2017 Reggio Emilia, Italy

M.SC. MANAGEMENT ENGINEERING Department of Science and Methods for Engineering – DISMI – University of Modena and Reggio Emilia

Address Via Amendola 2, 42122, Reggio Emilia, Italy

31/08/2010 – 17/03/2014 Parma, Italy

B.SC. MANAGEMENT ENGINEERING Department of Engineering and Architecture - University of Parma

Address Parco Area delle Scienze, 181/A, 43124, Parma, Italy

31/08/2005 – 30/06/2010 Modena, Italy

HIGH SCHOOL DIPLOMA Liceo Scientifico "A. Tassoni"

Address Viale Virginia Reiter, 66, 41121, Modena, Italy

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

SKILLS

Windows (Windows XP, Windows /vista, windows 8, windows 8.1, Windows 10) | Suite Office | Google GSuite | SolidWorks | Simcenter Starccm+ | Simcenter Amesim

PUBLICATIONS

2023

Combined numerical approach for the evaluation of the energy efficiency and economic investment of building external insulation technologies

2022

Experimental evaluation of the pyrolysis of plastic residues and waste tires

2021

CFD analysis and experimental measurements of the liquid aluminum spray formation for an Al–H2O based hydrogen production system

2021
Investigation on a full-scale heat pipe heat exchanger in the ceramics industry for waste heat recovery

2021
Comprehensive numerical model for the analysis of potential heat recovery solutions in a ceramic industry

2020
Development of an experimental test rig for the pyrolysis of plastic residues and waste tires

2020
Experimental and numerical analysis of a liquid aluminium injector for an Al-H2O based hydrogen production system

2020
A combined numerical approach for the thermal analysis of a piston water pump

2020
Life cycle assessment of an innovative cogeneration system based on the aluminum combustion with water

2020
An innovative approach to CTCs' liquid surgery

2019
A novel Carbon Capture and Utilisation concept applied to the ceramic industry

2019
A numerical approach for the combined analysis of the dynamic thermal behaviour of an entire ceramic roller kiln and the stress formation in the tiles

2019
Energy efficiency in industry: EU and national policies in Italy and the UK

2018
Influence of non-Newtonian fluid on transient operation of a liquid packaging machine: A combined 1D-3D approach

2017
CFD analysis of a full-scale ceramic kiln module under actual operating conditions

Milani, M., Montorsi, L., Stefani, M., & Venturelli, M. (2017). CFD analysis of a full-scale cerami

2018
Economic assessment of an integrated waste to energy system for an urban sewage treatment plant: A numerical approach

2018
A numerical approach for the evaluation of the energy efficiency in ventilated façade

CONFERENCES & SEMINARS

March 2020 (online), November 2021 (online), September 2022 (London)

Conference on "Sustainable Energy and Environmental Protection" (SEEP)

Best presentation award in SEEP 2022

October 2019 (Dubrovnik), October 2018 (Palermo), October 2017 (Dubrovnik)

Conference on “Sustainable Development of Energy, Water and Environment System (SDEWES)

June 2019 (Wroclaw)

Conference on Advances in Energy Systems and Environmental Engineering (ASEE)

November 2018 (Pittsburgh)

International Mechanical Engineering Congress and Exposition (IMECE)

VOLUNTEERING

CURRENT San Cesario sul Panaro

Volunteer

Volunteer in a local organization: promoting educational, athletic, and cultural projects and activities for teenagers

MANAGEMENT AND LEADERSHIP SKILLS

Good ability in coordinating team and scheduling activities

Good ability in gathering and sinthesizing information

COMMUNICATION AND INTERPERSONAL SKILLS

Good communication skills in multicultural context